FREQUENT SPECTRA OF INTENSITY OF COSMIC RAYS IN THE REGION $8.10^{-5} - 1,7.10^{-3}$ CYCLE PER SECOND DURING THE SOLAR FLASHES

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ABSTRACT

According to the 5-minute experimental data of the neutron supermonitor of SamSU the analysis of dynamics of the spectra of capacities of the intensity of cosmic rays during the solar flashes in November 2003 were calculated and were conducted. It is shown that before solar flashes within the time which is less than 1 day before the coming of flashy percussion wave to the Earth, in the spectra of capacities the redistribution of the spectral capacity by frequencies takes place. The common increase of the capacity of fluctuations with the periods 30-110 minutes reaching maximum during the flash, is observed. Frequently, during the solar flash highfrequent oscillations with the periods 10-15 minutes also arise. They lead to the increase of the inclination of the spectrum in the region of high frequencies.

The analyses was made each day with the displacement of 12 hours. The interval per day is chosen with the purpose of catching whole period of solar flash in one spectrum. The degree of authenticity of calculated spectra was being controlled by the procedure of tightening of window.

The analyses of spectra which were calculated for solar flashes, showed that before solar flash, 6-7 hours before it, the amplitude of quasi-periodical oscillation with periods 10-15 minutes increase. It brings to the increase of inclination of spectrum in the region of high frequencies.

At the same time in the region of low frequencies the spectrum behave in the contrary way Evidently, it is connected with the origin of fluctuations with periods 30-110 minutes. The existence of fluctuations of intensity of CR with the period 30- 110 minutes in the data of registration during the solar flash was shown by us in the work [1].

Thus, analyzing the dynamics of spectra of capacity of CRs intensity calculated during solar flashes and Forbush drops, one can say that the mechanism of the formation of fluctuation of intensity of CR during solar flashes and Forbush drops is similar.

REFERENCES

1. B. D. Abdurakhmanov etc. Coll. Magnetic fields. Saint Petersburg, 1994.